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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/024,203 | 12/21/2001 | Makoto Doki | 0152-0585P-SP | 4503 |

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| EXAMINER |
|---|
| MULLIS, JEFFREY C |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1711 | |

DATE MAILED: 08/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. 10/024,203 | Applicant(s) DOKI ET AL. |
|---|---|---|
| | Examiner Jeffrey C. Mullis | Art Unit 1711 |

*-- Th MAILING DATE of this communication appears on th cover she t with th corr spondenc address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *28 April 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 10-16* is/are rejected.

7)☒ Claim(s) *7-9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Applicant's election of a block copolymer and specifically the polyoxymethylene polymer "I-2"; a single thermoplastic elastomer which is a random block thermoplastic elastomer; lubricants disclosed in claim 11 and "III-1" at page 25; a single molded product such as a mechanical working component and specifically a gear in Paper No. 3 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

With regard to applicants' allegations regarding the block copolymer recited in claim 7 and in claim 8, it appears to the Examiner that the block copolymer of claim 8 could easily be made by the chain transfer of a polybutadiene with hydroxyl chain ends to formaldehyde and therefore claim 7 embraces the genus of claim 8.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 4 and 14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Shiraki (USP 5,278,246).

Note Examples 34 and 63 as well as comparative Examples 30, 36, 56 and 60 which begin starting in column 35 for combinations of styrene-diene-styrene block copolymers and polyoxymethylene polymers. Note applicants' molecular weight at column 12 lines 40-49.

With regard to applicants' characteristic, note Sanada et al. (USP 5,886,094) who discloses at column 4 line 57 - column 5 line 39 that raising the 1,2 bond content in styrene-diene block copolymers increases tan δ and that tan δ having such a level of 1,2 bond content has a peak in the tan δ of not less than -20°C. Note the Examples of Shiraki et al. and specifically at column 18 lines 33-39 where it is disclosed that tetrahydrofuran is utilized during the polymerization of the block copolymer. Since tetrahydrofuran is known to raise the 1,2 bond content in alkyl lithium polymerizations of butadiene, it would reasonably appear that applicants' and Shiraki's tan δ characteristic is inherently

the same even aside from the fact applicants' and patentees' specifications both disclose the use of styrene-diene-styrene block copolymers.

When the reference discloses all the limitations of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention, basis exists for shifting the burden of proof to applicant. Note In re Fitzgerald et al. 619 F. 2d 67, 70, 205 USPQ 594, 596, (CCPA 1980). See MPEP § 2112-2112.02.

Claims 3, 5, 6, 10-13, 15 and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shiraki et al., cited above in view of Sanada et al. (USP 5,886,094).

Shiraki et al. does not disclose any specific examples in which lubricants are used although such is broadly disclosed by Shiraki at around column 16 line 61 and no specific examples of applicants' compositions in the form of a machine part are disclosed although Shiraki broadly discloses that his compositions may be converted to machine parts at column 43 lines 45-64 and isoprene is not utilized as the block copolymer component although Shiraki's specification discloses that isoprene and butadiene can be used equivalently and as Shiraki discloses no specific examples in which the polyoxymethylene polymer contains copolymerized epoxides although such are broadly

disclosed by Shiraki at column 9 lines 1-13. Note the use of isoprene at column 12 line 46. Furthermore, there is the possibility that the Examiner is incorrect regarding the allegation that Shiraki's tan δ characteristic is inherently the same as that required by the instant claims.

It would have been obvious to a practitioner having ordinary skill in the art at the time of the invention to use lubricants of Shiraki's composition to produce machine parts from his composition or injection mold his composition or utilize isoprene units or epoxide units of Shiraki's polymers since Shiraki says that this may be done in the expectation of adequate results absent any showing of surprising or unexpected results.

Note Sanada et al. at column 4 line 56 - column 5 line 39 where it is disclosed that tan δ peak temperature should not be less than -20°C in styrene-diene block copolymer containing compositions in order to achieve optimal damping characteristic.

It would have been obvious to a practitioner having ordinary skill in the art at the time of the invention to utilize block copolymers having a tan δ peak temperature of -20°C as taught by Sanada et al. in the composition of Shiraki et al. in the expectation of optimizing damping characteristic in the primary reference absent any showing of surprising or unexpected results.

Claims 7-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in

independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Mullis whose telephone number is (703) 308-2820. The examiner can normally be reached on Monday-Friday from 9:30 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on (703) 308-2462. The fax phone number for this Group is before final (703) 872-9310 and after final (703) 8729311.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2351.

J. Mullis:cdc
August 7, 2003

Jeffrey Mullis
Primary Examiner
Art Unit 1711